Department of Defense
INSTRUCTION

NUMBER 5000.2
May 12, 2003

USD(AT&L)

SUBJECT: Operation of the Defense Acquisition System

References:
(a) DoD Instruction 5000.2, "Operation of the Defense Acquisition System," April 5, 2003 (hereby canceled)
(b) DoD 5000.2-R, "Mandatory Procedures for Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) Acquisition Programs," April 5, 2002 (hereby canceled)
(c) DoD Directive 5000.1, "The Defense Acquisition System," May 12, 2003
(d) through (bl), see enclosure 1

1. PURPOSE

This Instruction:

1.1. Reissues reference (a) and cancels reference (b).

1.2. Implements reference (c), the guidelines of references (d) and (e), and current laws.

1.3. Establishes a simplified and flexible management framework for translating mission needs and technology opportunities, based on approved mission needs and requirements, into stable, affordable, and well-managed acquisition programs that include weapon systems and automated information systems (AISs).

1.4. Consistent with statutory requirements and reference (c), authorizes Milestone Decision Authorities (MDAs) to tailor procedures to achieve cost, schedule, and performance goals.

2. APPLICABILITY AND SCOPE

This Instruction applies to:

2.1. The Office of the Secretary of Defense, the Military Departments, the Chairman of the Joint Chiefs of Staff (Joint Staff), the Combatant Commands, the Office of the Inspector General of the Department of Defense, the Defense Agencies, DoD Field Activities, and all other organizational entities within the Department of Defense (hereafter referred to collectively as "the DoD Components").

2.2. All defense technology projects and acquisition programs. Some requirements, where stated, apply only to Major Defense Acquisition Programs (MDAPs) and Major Automated Information System (MAIS) programs.

2.3. In general, highly sensitive classified, cryptologic, and intelligence projects and programs shall follow the guidance in this Instruction and reference (c) for technology projects and acquisition programs of equivalent acquisition category (ACAT).

Report Documentation Page

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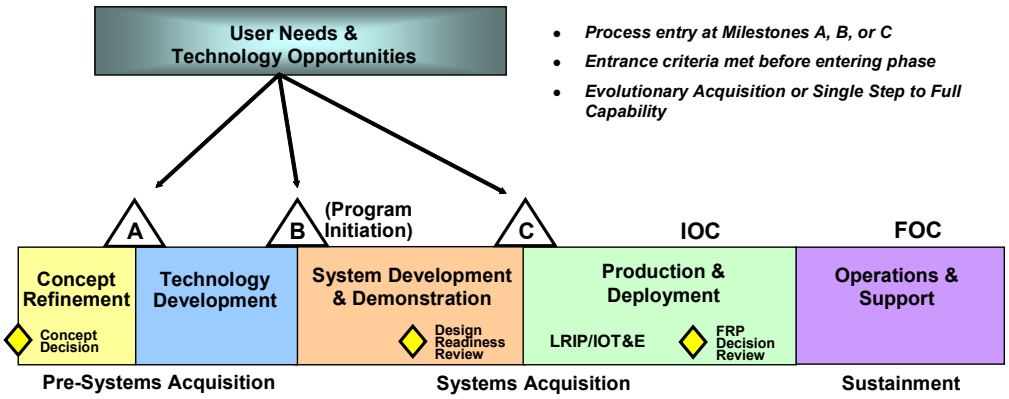
Figure 1. The Defense Acquisition Management Framework.



3. PROCEDURES

3.1. Defense Acquisition Management Framework. Figure 1 depicts the Defense Acquisition Management Framework.

3.1.1. Consistent with reference (c), the program manager (PM) and the MDA shall exercise discretion and prudent business judgment to structure a tailored, responsive, and innovative program.

3.1.2. The MDA may authorize entry into the acquisition system at any point, consistent with phase-specific entrance criteria and statutory requirements. Progress through the acquisition life cycle depends on obtaining sufficient knowledge to continue to the next stage of development.

3.1.3. The tables at enclosure 3 identify the statutory and regulatory information requirements of each milestone and decision point. Additional non-mandatory guidance on best practices, lessons learned, and expectations is available in a guidebook at http://dod5000.dau.mil/.

3.2. Requirements and Acquisition Integration

3.2.1. Integrated Architectures

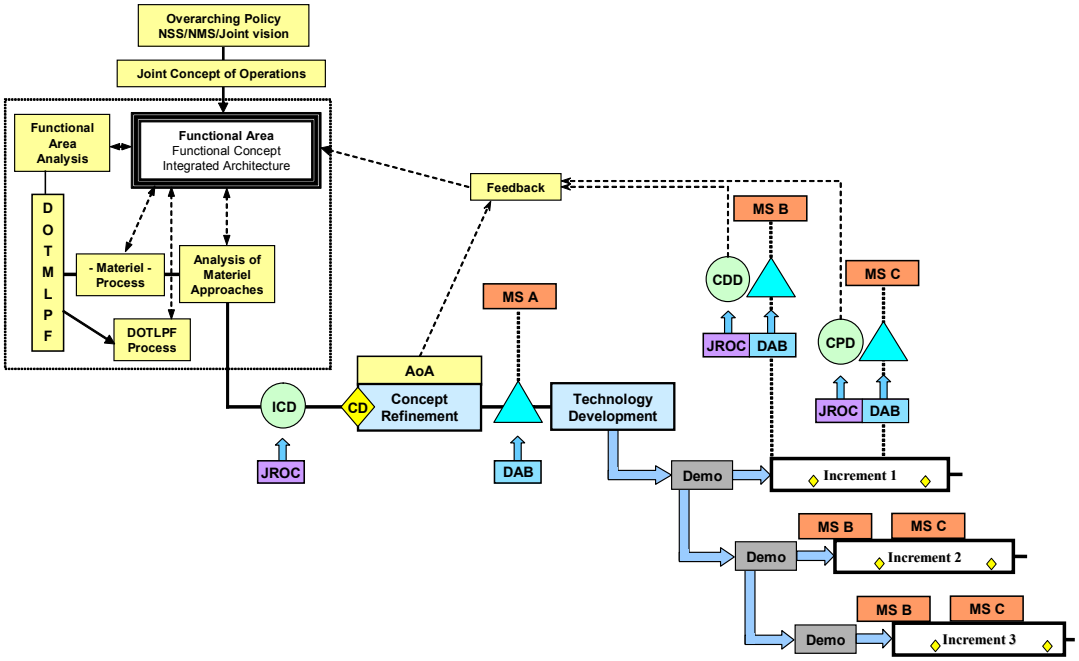
3.2.1.1. The Under Secretary of Defense (Acquisition, Technology, and Logistics) (USD(AT&L)), the Assistant Secretary of Defense for Command, Control, Communications, and Intelligence (ASD(C3I)), the Joint Staff, the Military Departments, the Defense Agencies, Combatant Commanders, and other appropriate DoD Components shall work collaboratively to develop joint integrated architectures for capability areas as agreed to by the Joint Staff. In addition, the Under Secretary of Defense (Comptroller) (USD(C)) is responsible for the development of the Financial Management Enterprise Architecture.

3.2.1.2. Each integrated architecture shall have three views: operational, systems, and technical, as defined in the current Architectural Framework guidance and have direct relationships to DoD Component-developed functional area integrated architectures. The Joint Staff (or Principal Staff Assistant (PSA) for business areas) shall lead development of the operational view, in collaboration with the Services, Agencies, and Combatant Commanders, to describe the joint capabilities that the user seeks and how to employ them. The USD(AT&L) (or PSA for business areas) shall lead development of the systems view, in collaboration with the Services, Agencies, and Combatant Commanders, to characterize available technology and

systems functionality. The systems view shall identify the kinds of systems and integration needed to achieve the desired operational capability. The DoD Chief Information Officer (CIO) shall lead the development and facilitate the implementation of the Global Information Grid Integrated Architecture, which shall underpin all mission area and capability architectures. The Military Departments and Defense Agencies shall participate in the identification of the appropriate technical view consisting of standards that define and clarify the individual systems technology and integration requirements. The standards used to form the Technical Views of integrated architectures shall be selected from those contained in the current approved version of the Joint Technical Architecture, accessible at http://jta.disa.mil/, reference (f).

3.2.2. Integrated Capability Assessments, Capability Roadmaps, and Investment Strategies. Using the integrated architectures, the USD(AT&L) shall lead the development of integrated plans or roadmaps. The Department of Defense shall use these roadmaps to conduct capability assessments, guide systems development, and define the associated investment plans as the basis for aligning resources and as an input to the Defense Planning Guidance, Program Objective Memorandum development, and Program and Budget Reviews.

Figure 2. Requirements and Acquisition Process Depiction.



3.3. Evolutionary Acquisition

3.3.1. Evolutionary acquisition is the preferred DoD strategy for rapid acquisition of mature technology for the user. An evolutionary approach delivers capability in increments, recognizing, up front, the need for future capability improvements. The objective is to balance needs and available capability with resources, and to put capability into the hands of the user quickly. The success of the strategy depends on consistent and continuous definition of requirements, and the maturation of technologies that lead to disciplined development and production of systems that provide increasing capability towards a materiel concept. (See Figure 2.)

3.3.2. The approaches to achieve evolutionary acquisition require collaboration between the user, tester, and developer. They include:

3.3.2.1. Spiral Development. In this process, a desired capability is identified, but the end-state requirements are not known at program initiation. Those requirements are refined through demonstration and risk management; there is continuous user feedback; and each increment provides the user the best possible capability. The requirements for future increments depend on feedback from users and technology maturation.

3.3.2.2. Incremental Development. In this process, a desired capability is identified, an end-state requirement is known, and that requirement is met over time by developing several increments, each dependent on available mature technology.

3.4. User Needs and Technology Opportunities

3.4.1. The capability needs and acquisition management systems shall use Joint Concepts, integrated architectures, and an analysis of doctrine, organization, training, materiel, leadership, personnel, and facilities (DOTMLPF) in an integrated, collaborative process to define desired capabilities to guide the development of affordable systems. The Chairman of the Joint Chiefs of Staff, with the assistance of the Joint Requirements Oversight Council, shall assess and provide advice regarding military capability needs for defense acquisition programs. The process through which the Chairman provides his advice is described in Chairman of the Joint Chiefs of Staff Instruction 3170.01(reference (g)). Representatives from multiple DoD communities shall assist in formulating broad, time-phased, operational goals, and describing requisite capabilities in the Initial Capabilities Document (ICD). They shall examine multiple concepts and materiel approaches to optimize the way the Department of Defense provides these capabilities. The examination shall include robust analyses that consider affordability, technology maturity, and responsiveness.

3.4.2. Technologists and industry shall identify and protect promising technologies in laboratories and research centers, academia, and foreign and domestic commercial sources; reduce the risks of introducing these technologies into the acquisition process; and promote coordination, cooperation, and mutual understanding of technology issues. The conduct of Science & Technology (S&T) activities shall not preclude, and where practicable, shall facilitate future competition.

3.5. Concept Refinement

3.5.1. Purpose. The purpose of this phase is to refine the initial concept and develop a Technology Development Strategy (TDS). Entrance into this phase depends upon an approved ICD resulting from the analysis of potential concepts across the DoD Components, international systems from Allies, and cooperative opportunities; and an approved plan for conducting an analysis of alternatives (AoA) for the selected concept, documented in the approved ICD.

3.5.2. Concept Refinement begins with the Concept Decision. The MDA designates the lead DoD Component(s) to refine the initial concept selected, approves the AoA plan, and establishes a date for a Milestone A review. The MDA decisions shall be documented in an Acquisition Decision Memorandum (ADM). This effort shall normally be funded only for the concept refinement work. The MDA decision to begin Concept Refinement DOES NOT mean that a new acquisition program has been initiated. The tables in enclosure 3 identify all statutory and regulatory requirements for the Concept Refinement decision.

3.5.3. The ICD and the AoA plan shall guide Concept Refinement. The focus of the AoA is to refine the selected concept documented in the approved ICD. The AoA shall assess

the critical technologies associated with these concepts, including technology maturity, technical risk, and, if necessary, technology maturation and demonstration needs. To achieve the best possible system solution, emphasis shall be placed on innovation and competition. Existing commercial-off-the-shelf (COTS) functionality and solutions drawn from a diversified range of large and small businesses shall be considered.

3.5.4. The results of the AoA shall provide the basis for the TDS, to be approved by the MDA at Milestone A for potential ACAT I and IA programs. The TDS shall document the following:

3.5.4.1. The rationale for adopting an evolutionary strategy (for most programs) or a single-step-to-full-capability strategy (e.g., for common supply items or COTS items). For an evolutionary acquisition, either spiral or incremental, the TDS shall include a preliminary description of how the program will be divided into technology spirals and development increments, an appropriate limitation on the number of prototype units that may be produced and deployed during technology development, how these units will be supported, and specific performance goals and exit criteria that must be met before exceeding the number of prototypes that may be produced under the research and development program.

3.5.4.2. A program strategy, including overall cost, schedule, and performance goals for the total research and development program.

3.5.4.3. Specific cost, schedule, and performance goals, including exit criteria, for the first technology spiral demonstration.

3.5.4.4. A test plan to ensure that the goals and exit criteria for the first technology spiral demonstration are met.

3.5.5. Concept Refinement ends when the MDA approves the preferred solution resulting from the AoA and approves the associated TDS.

3.6. Technology Development

3.6.1. Purpose. The purpose of this phase is to reduce technology risk and to determine the appropriate set of technologies to be integrated into a full system. Technology Development is a continuous technology discovery and development process reflecting close collaboration between the S&T community, the user, and the system developer. It is an iterative process designed to assess the viability of technologies while simultaneously refining user requirements.

3.6.2. The project shall enter Technology Development at Milestone A when the MDA has approved the TDS. The tables in enclosure 3 identify all statutory and regulatory requirements applicable to Milestone A. This effort normally shall be funded only for the advanced development work. For business area capabilities, commercially available solutions shall be employed. (A toolkit of best practices is available at http://deskbook.dau.mil). A favorable Milestone A decision DOES NOT mean that a new acquisition program has been initiated.

3.6.3. Shipbuilding programs may be initiated at the beginning of Technology Development. The information required in the tables at enclosure 3 shall support program initiation. A cost assessment shall be prepared in lieu of an independent cost estimate (ICE), and a preliminary assessment of the maturity of key technologies shall be provided.

3.6.4. Before requesting a Milestone A decision for an AIS program, DoD Components shall affirmatively answer the following questions:

3.6.4.1. Does the acquisition support core/priority mission functions that need to be performed by the Federal Government?

3.6.4.2. Does the acquisition need to be undertaken by the DoD Component because no alternative private sector or governmental source can better support the function?

3.6.4.3. Does the acquisition support work processes that have been simplified or otherwise redesigned to reduce costs, improve effectiveness, and make maximum use of commercial off-the-shelf technology?

3.6.5. The ICD and the TDS shall guide this effort. Multiple technology development demonstrations may be necessary before the user and developer agree that a proposed technology solution is affordable, militarily useful, and based on mature technology. The TDS shall be reviewed and updated upon completion of each technology spiral and development increment. Updates shall be approved to support follow-on increments.

3.6.6. If an evolutionary strategy is used, the initial capability represents only partial fulfillment of the overall capability described in the ICD, and successive technology development efforts continue until all capabilities have been satisfied. In an evolutionary acquisition, the identification and development of the technologies necessary for follow-on increments continues in parallel with the acquisition of preceding increments, allowing the mature technologies to more rapidly proceed into System Development and Demonstration (SDD). Each increment of an evolutionary acquisition program shall have an associated MDA-approved TDS.

3.6.7. The project shall exit Technology Development when an affordable increment of militarily-useful capability has been identified, the technology for that increment has been demonstrated in a relevant environment, and a system can be developed for production within a short timeframe (normally less than five years); or when the MDA decides to terminate the effort. During Technology Development, the user shall prepare the Capability Development Document (CDD) to support program initiation, refine the integrated architecture, and clarify how the program will lead to joint warfighting capability. The CDD builds on the ICD and provides the detailed operational performance parameters necessary to design the proposed system. A Milestone B decision follows the completion of Technology Development.

3.7. System Development and Demonstration

3.7.1. Purpose

3.7.1.1. The purpose of the SDD phase is to develop a system or an increment of capability; reduce integration and manufacturing risk (technology risk reduction occurs during Technology Development); ensure operational supportability with particular attention to reducing the logistics footprint; implement human systems integration (HSI); design for producibility; ensure affordability and the protection of critical program information (CPI) by implementing appropriate techniques such as anti-tamper; and demonstrate system integration, interoperability, safety, and utility. Development and demonstration are aided by the use of simulation-based acquisition and test and evaluation integrated into an efficient continuum and guided by a system acquisition strategy and test and evaluation master plan (TEMP). The independent planning of dedicated Initial Operational Test and Evaluation (IOT&E), as required

by law, and Follow-on Operational Test and Evaluation (FOT&E), if required, shall be the responsibility of the appropriate operational test agency (OTA). A Director, Operational Test & Evaluation (DOT&E)-approved live-fire test and evaluation (LFT&E) strategy shall guide LFT&E activity.

3.7.1.2. SDD has two major efforts: System Integration and System Demonstration. The entrance point is Milestone B, which is also the initiation of an acquisition program. There shall be only one Milestone B per program or evolutionary increment. Each increment of an evolutionary acquisition shall have its own Milestone B. The tables in enclosure 3 identify the statutory and regulatory requirements that shall be met at Milestone B. For Shipbuilding Programs, the required program information shall be updated in support of the Milestone B decision, and the ICE shall be completed. The lead ship in a class shall normally be authorized at Milestone B. Technology readiness assessments shall consider the risk associated with critical subsystems prior to ship installation. Long lead for follow ships may be initially authorized at Milestone B, with final authorization and follow ship approval by the MDA dependent on completion of critical subsystem demonstration and an updated assessment of technology maturity.

3.7.2. Entrance Criteria. Entrance into this phase depends on technology maturity (including software), approved requirements, and funding. Unless some other factor is overriding in its impact, the maturity of the technology shall determine the path to be followed. Programs that enter the acquisition process at Milestone B shall have an ICD that provides the context in which the capability was determined and approved, and a CDD that describes specific program requirements.

3.7.2.1. Before proposing a new acquisition program, the DoD Components shall affirmatively answer the questions at paragraphs 3.6.4.1. through 3.6.4.3.

3.7.2.2. The management and mitigation of technology risk, which allows less costly and less time-consuming systems development, is a crucial part of overall program management and is especially relevant to meeting cost and schedule goals. Objective assessment of technology maturity and risk shall be a routine aspect of DoD acquisition. Technology developed in S&T or procured from industry or other sources shall have been demonstrated in a relevant environment or, preferably, in an operational environment to be considered mature enough to use for product development in systems integration. Technology readiness assessments, and where necessary, independent assessments, shall be conducted. If technology is not mature, the DoD Component shall use alternative technology that is mature and that can meet the user's needs.

3.7.2.3. Prior to beginning SDD, users shall identify and the requirements authority shall approve a minimum set of key performance parameters (KPPs), included in the CDD, that shall guide the efforts of this phase. These KPPs may be refined, with the approval of the requirements authority, as conditions warrant. Each set of KPPs shall only apply to the current increment of capability in development and demonstration (or to the entire system in a single step to full capability). At Milestone B, the PM shall prepare and the MDA shall approve an acquisition strategy to guide activity during SDD. The acquisition strategy shall include a TDS for the next technology spiral(s) (see paragraph 3.3.2.1, above).

3.7.2.4. In an evolutionary acquisition program, the development of each increment shall begin with a Milestone B, and production resulting from that increment shall

begin with a Milestone C. The requirements of the tables at enclosure 3 shall apply to each increment based on the ACAT level of the entire planned program.

3.7.2.5. Each program or increment shall also have an Acquisition Program Baseline establishing program goals—thresholds and objectives—for the minimum number of cost, schedule, and performance parameters that describe the program over its life cycle.

3.7.2.6. An affordability determination results from the process of addressing cost during the requirements process and is included in each CDD using life-cycle cost or, if available, total ownership cost. Transition into SDD also requires full funding (i.e., inclusion of the dollars and manpower needed for all current and future efforts to carry out the acquisition strategy in the budget and out-year program), which shall be programmed when a system concept and design have been selected, a PM has been assigned, requirements have been approved, and system-level development is ready to begin. In the case of a replacement system, when the Milestone B is projected to occur in the first 2 years of the Future Years Defense Program under review, the program shall be fully funded in that Planning, Programming, and Budgeting System cycle. In no case shall full funding be done later than Milestone B, unless a program first enters the acquisition process at Milestone C. The DoD Components shall fully fund their share of approved joint and international cooperative program commitments.

3.7.3. System Integration. This effort is intended to integrate subsystems, complete detailed design, and reduce system-level risk. The program shall enter System Integration when the PM has a technical solution for the system, but has not yet integrated the subsystems into a complete system. The CDD shall guide this effort. This effort shall typically include the demonstration of prototype articles or engineering development models (EDMs).

3.7.4. Proceeding beyond the Design Readiness Review. The Design Readiness Review during SDD provides an opportunity for mid-phase assessment of design maturity as evidenced by measures such as the number of subsystem and system design reviews successfully completed; the percentage of drawings completed; planned corrective actions to hardware/software deficiencies; adequate development testing; an assessment of environment, safety and occupational health risks; a completed failure modes and effects analysis; the identification of key system characteristics and critical manufacturing processes; an estimate of system reliability based on demonstrated reliability rates; etc. Successful completion of the Design Readiness Review ends System Integration and continues the SDD phase into the System Demonstration effort. MDAs may, consistent with the intent of this paragraph, determine the form and content of the review.

3.7.5. System Demonstration. This effort is intended to demonstrate the ability of the system to operate in a useful way consistent with the approved KPPs. The program shall enter System Demonstration when the PM has demonstrated the system in prototypes or EDMs. This effort shall end when a system is demonstrated in its intended environment, using the selected prototype; meets approved requirements; industrial capabilities are reasonably available; and the system meets or exceeds exit criteria and Milestone C entrance requirements. Successful development test and evaluation to assess technical progress against critical technical parameters, early operational assessments, and, where proven capabilities exist, the use of modeling and simulation to demonstrate system integration are critical during this effort. The completion of this phase is dependent on a decision by the MDA to commit to the program at Milestone C or a decision to end this effort.

3.7.6. The Department of Defense may not conduct operational testing (i.e., operational assessment (OA), IOT&E, or FOT&E) until the DOT&E approves, in writing, the OT&E portions of the combined developmental and operational test plan for programs on the OSD T&E Oversight List, and the adequacy of the plans (including the projected level of funding) for the OT&E to be conducted in connection with that program (reference (h)). Deficiencies encountered in testing prior to Milestone C shall be resolved prior to proceeding beyond Low-Rate Initial Production (LRIP) (at the Full-Rate Production Decision Review) and any fixes verified in FOT&E.

3.8. Production and Deployment

3.8.1. Purpose

3.8.1.1. The purpose of the Production and Deployment phase is to achieve an operational capability that satisfies mission needs. Operational test and evaluation shall determine the effectiveness and suitability of the system. The MDA shall make the decision to commit the Department of Defense to production at Milestone C. Milestone C authorizes entry into LRIP (for MDAPs and major systems), into production or procurement (for non-major systems that do not require LRIP) or into limited deployment in support of operational testing for MAIS programs or software-intensive systems with no production components. The tables at enclosure 3 identify the statutory and regulatory requirements that shall be met at Milestone C.

3.8.1.2. For MDAPs and other DOT&E Oversight programs, Production and Deployment has two major efforts, LRIP and Full-Rate Production and Deployment, and includes a Full-Rate Production Decision Review.

3.8.2. Entrance Criteria. Entrance into this phase depends on the following criteria: acceptable performance in development, test and evaluation and operational assessment; mature software capability; no significant manufacturing risks; manufacturing processes under control (if Milestone C is full-rate production); an approved ICD (if Milestone C is program initiation); an approved Capability Production Document (CPD); acceptable interoperability; acceptable operational supportability; compliance with the DoD Strategic Plan; and demonstration that the system is affordable throughout the life cycle, optimally funded, and properly phased for rapid acquisition. The CPD reflects the operational requirements resulting from SDD and details the performance expected of the production system. If Milestone C approves LRIP, a subsequent review and decision shall authorize full-rate production.

3.8.3. LRIP

3.8.3.1. This effort is intended to result in completion of manufacturing development in order to ensure adequate and efficient manufacturing capability and to produce the minimum quantity necessary to provide production or production-representative articles for IOT&E, establish an initial production base for the system; and permit an orderly increase in the production rate for the system, sufficient to lead to full-rate production upon successful completion of operational (and live-fire, where applicable) testing.

3.8.3.2. LRIP quantities shall be minimized. The MDA shall determine the LRIP quantity for MDAPs and major systems at Milestone B. The LRIP quantity for an MDAP (with rationale for quantities exceeding 10 percent of the total production quantity documented in the acquisition strategy) shall be included in the first Selected Acquisition Report after its determination. Any increase in quantity after the initial determination shall be approved by the

MDA. The LRIP quantity shall not be less than one unit. When approved LRIP quantities are expected to be exceeded because the program has not yet demonstrated readiness to proceed to full-rate production, the MDA shall assess the cost and benefits of a break in production versus continuing annual buys.

3.8.3.3. DOT&E shall determine the number of production or production-representative test articles required for LFT&E and IOT&E of DOT&E Oversight Programs (MDAPs as defined in paragraph a(2)(B) of 10 U.S.C. 139) (reference (i)). For a system that is not a DOT&E Oversight Program, the OTA shall determine the number of test articles required for IOT&E. Modifications to an existing system with an established production base may not require low-rate production to provide production or production-representative articles for operational testing; test articles, if needed, may come from the existing production line.

3.8.3.4. LRIP is not applicable to AISs or software-intensive systems with no developmental hardware; however, a limited deployment phase may be applicable. Software shall have demonstrated the maturity level required in the CPD prior to deploying it to the operational environment. Once the maturity level has been demonstrated, the system or increment is baselined, and a methodical and synchronized deployment plan is implemented for all applicable locations.

3.8.3.5. LRIP for ships and satellites is production of items at the minimum quantity and rate that is feasible and that preserves the mobilization production base for that system.

3.8.4. Full-Rate Production Criteria. An MDAP may not proceed beyond LRIP without approval of the MDA. The available knowledge to support this approval shall include demonstrated control of the manufacturing process and acceptable reliability, the collection of statistical process control data, and the demonstrated control and capability of other critical processes. The decision to continue beyond low-rate to full-rate production, or beyond limited deployment of AISs or software-intensive systems with no developmental hardware, shall require completion of IOT&E, submission of the Beyond LRIP Report for DOT&E Oversight Programs, and submission of the LFT&E Report (where applicable) to Congress, to the Secretary of Defense, and to the USD(AT&L).

3.8.5. Full-Rate Production and Deployment. Continuation into full-rate production results from a successful Full-Rate Production Decision Review by the MDA (or person designated by the MDA). This effort delivers the fully funded quantity of systems and supporting materiel and services for the program or increment to the users. During this effort, units shall attain Initial Operational Capability. The tables at enclosure 3 identify the statutory and regulatory requirements associated with this decision.

3.9. Operations and Support

3.9.1. Purpose. The objective of this activity is the execution of a support program that meets operational support performance requirements and sustains the system in the most cost-effective manner over its total life cycle. When the system has reached the end of its useful life, it shall be disposed of in an appropriate manner. Operations and Support has two major efforts: Sustainment and Disposal.

3.9.2. Sustainment

3.9.2.1. Sustainment includes supply, maintenance, transportation, sustaining engineering, data management, configuration management, manpower, personnel, training,

habitability, survivability, environment, safety (including explosives safety), occupational health, protection of critical program information, anti-tamper provisions, and information technology (IT), including National Security Systems (NSS), supportability and interoperability functions.

3.9.2.2. Effective sustainment of weapon systems begins with the design and development of reliable and maintainable systems through the continuous application of a robust systems engineering methodology. As a part of this process, the PM shall employ human factors engineering to design systems that require minimal manpower; provide effective training; can be operated and maintained by users; and are suitable (habitable and safe with minimal environmental and occupational health hazards) and survivable (for both the crew and equipment).

3.9.2.3. The PM shall work with the users to document performance and support requirements in performance agreements specifying objective outcomes, measures, resource commitments, and stakeholder responsibilities. The Military Services shall document sustainment procedures that ensure integrated combat support.

3.9.2.4. The DoD Components shall initiate system modifications, as necessary, to improve performance and reduce ownership costs.

3.9.2.4.1. PMs shall optimize operational readiness through affordable, integrated, embedded diagnostics and prognostics, and embedded training and testing; serialized item management; automatic identification technology (AIT); and iterative technology refreshment.

3.9.2.4.2. PMs shall ensure that data syntax and semantics for high capacity AIT devices conform to International Organization for Standardization (ISO) 15434 and ISO 15418, references (j) and (k).

3.9.2.5. The Services, in conjunction with users, shall conduct continuing reviews of sustainment strategies, utilizing comparisons of performance expectation as defined in performance agreements against actual performance measures. PMs shall revise, correct, and improve sustainment strategies as necessary to meet performance requirements.

3.9.2.6. Sustainment strategies shall evolve and be refined throughout the life cycle, particularly during development of subsequent increments of an evolutionary strategy, modifications, upgrades, and reprocurement. The PM shall ensure that a flexible, performance-oriented strategy to sustain systems is developed and executed.

3.9.3. Disposal. At the end of its useful life, a system shall be demilitarized and disposed in accordance with all legal and regulatory requirements and policy relating to safety (including explosives safety), security, and the environment. During the design process, PMs shall document hazardous materials contained in the system, and shall estimate and plan for the system's demilitarization and safe disposal.

3.10. Review Procedures

3.10.1. Review of ACAT ID and IAM Programs. The USD(AT&L) shall designate programs as ACAT ID, and the ASD(C3I) shall designate programs as ACAT IAM, when the program has special interest based on one or more of the following factors: technological complexity; Congressional interest; a large commitment of resources; the program is critical to achievement of a capability or set of capabilities; or the program is a joint program. Exhibiting

one or more of these characteristics, however, shall not automatically lead to an ACAT ID or IAM designation.

3.10.2. Defense Acquisition Board (DAB) Review. The DAB shall advise the USD(AT&L) on critical acquisition decisions. The USD(AT&L) shall chair the DAB, and the Vice Chairman of the Joint Chiefs of Staff shall serve as the co-chair. An ADM shall document the decision(s) resulting from the review.

3.10.3. IT Acquisition Board (ITAB) Review. The ITAB shall advise the ASD(C3I)/DoD CIO on critical acquisition decisions. These reviews shall enable the execution of the DoD CIO's acquisition-related responsibilities for IT, including NSS, under the Clinger-Cohen Act (CCA), reference (l), and Title 10 of United States Code, reference (m). An ADM shall document the decision(s) resulting from the review.

3.10.4. Overarching Integrated Product Team (OIPT). An OIPT shall facilitate program communications and issue resolution, and support the MDA, for ACAT I and IA programs.

4. RESPONSIBILITIES

MDAs shall establish mandatory procedures for assigned programs. These procedures shall not exceed the requirements for MDAPs and MAIS acquisition programs established in this Instruction or in reference (c). The Heads of the DoD Components shall keep the issuance of any directives, instructions, policy memorandums, or regulations necessary to implement the mandatory procedures contained in this Instruction and reference (c) to a minimum. Waivers or requests for exceptions to the provisions of this Instruction shall be submitted to the USD(AT&L), ASD(C3I), or DOT&E, as appropriate via the Component Acquisition Executive (CAE). Statutory requirements cannot be waived unless the statute specifically provides for waiver of the stated requirements.

5. EFFECTIVE DATE

This Instruction is effective immediately.

Under Secretary of Defense (Acquisition, Technology, and Logistics)

Assistant Secretary of Defense (Command, Control, Communications, and Intelligence)

Director, Operational Test and Evaluation

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E1. ENCLOSURE 1

REFERENCES, continued

(d) OMB Circular A-11, "Preparing, Submitting, and Executing the Budget," June 27, 2002
(e) OMB Circular A-109, "Major Systems Acquisitions," April 1976
(f) Department of Defense Joint Technical Architecture, current version
(g) Chairman of the Joint Chiefs of Staff Instruction 3170.01 Series, "Requirements Generation System," April 15, 2001
(h) Section 2399 of title 10, United States Code, "Operational Test and Evaluation of Defense Acquisition Programs"
(i) Section 139 of title 10, United States Code, "Director of Operational Test and Evaluation"
(j) ISO 15418-1999- "EAN/UCC Application Identifiers and Fact Data Identifiers and Maintenance"
(k) ISO 15434-1999 – "Transfer Syntax for High Capacity ADC Media"
(l) Subtitle III of title 40, United States Code [formerly the Clinger-Cohen Act of 1996 which was repealed and many of its provisions reenacted at 40 U.S.C. 11101 et seq.]
(m) Title 10, United States Code, "Armed Forces"
(n) Section 2430 of title 10, United States Code, "Major Defense Acquisition Program Defined"
(o) Section 2302d of title 10, United States Code, "Major system: definitional threshold amounts"
(p) Section 2302 of title 10, United States Code, "Definitions"
(q) Section 2364 of title 10, United States Code, "Coordination and Communication of Defense Research Activities"
(r) Section 2377 of title 10, United States Code, "Preference for Acquisition of Commercial Items"
(s) Section 644 of title 15, United States Code, "Procurement strategies; contract bundling"
(t) Section 8088, Public Law 107-248, "Department of Defense Appropriation Act for Fiscal Year 2003" (or successor provision)
(u) Section 306 of title 5, United States Code, "Strategic Plans" (part of the Government Performance and Results Act)
(v) Section 11313 of title 40, United States Code, untitled
(w) Section 811 of the "Floyd D. Spence National Defense Authorization Act for Fiscal Year 2001," Public Law 106-398 Appendix
(x) Section 4321 et seq. of title 42, United States Code, "National Environmental Policy Act"
(y) Section 305 of title 47, United States Code, "Government-Owned Stations"
(z) Section 104 of the National Telecommunications and Information Organization Act (Pub. L. 102-538), "Spectrum Management Activities"
(aa) Sections 901, 902, 903, and 904 of title 47, United States Code
(ab) DoD Directive 4650.1, "Management and Use of the Radio Frequency Spectrum," June 24, 1987
(ac) Section 2432 of title 10, United States Code, "Selected Acquisition Reports"
(ad) Section 2433 of title 10, United States Code, "Unit Cost Reports"
(ae) Section 2366 of title 10, United States Code, "Major Systems and Munitions Programs: Survivability and Lethality Testing Required Before Full-Scale Production"
(af) Section 2440 of title 10, United States Code, "Technology and Industrial Base Plans"

(ag) Section 2400 of title 10, United States Code, "Low-Rate Initial Production of New Systems"
(ah) Section 2434 of title 10, United States Code, "Independent Cost Estimates; Operational Manpower Requirements"
(ai) Section 220, Public Law 103-160, as amended by Sec. 214 of Pub.L. 103-337
(aj) Section 2460 of title 10, United States Code, "Definition of Depot-Level Maintenance and Repair"
(ak) Section 2464 of title 10, United States Code, "Core Logistics Capabilities"
(al) Section 2466 of title 10, United States Code, "Limitations on the Performance of Depot-Level Maintenance of Material"
(am) Section 2469 of title 10, United States Code, "Contracts to Perform Workloads Previously Performed by Depot-Level Activities of the Department of Defense: Requirement of Competition"
(an) Section 803, Public Law 107-314, "Bob Stump National Defense Authorization Act for Fiscal Year 2003," "Spiral development under major defense acquisition programs"
(ao) Section 2435 of title 10, United States Code, "Baseline Description"
(ap) Section 2350a of title 10, United States Code, "Cooperative Research and Development Programs: Allied Countries"
(aq) DoD Directive 5105.21, "Defense Intelligence Agency (DIA)," February 18, 1997
(ar) DoD Instruction 4630.8, "Procedures for Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," May 2, 2002
(as) DoD Directive 4630.5, "Interoperability and Supportability of Information Technology (IT) and National Security Systems (NSS)," January 11, 2002
(at) CJCSI 6212.01B, "Interoperability and Supportability of National Security Systems, and Information Technology Systems," May 8, 2000
(au) DoD Directive 5200.39, "Security, Intelligence, and Counterintelligence Support to Acquisition Program Protection," September 10, 1997
(av) American National Standards Institute (ANSI)/Electronic Industries Alliance (EIA) 748-A-1998 (R2002), August 28, 2002
(aw) DoD 5000.4-M-1, "Contractor Cost Data Reporting (CCDR) Manual," April 1999
(ax) Section 1004, Public Law 107-314, "Bob Stump National Defense Authorization Act for Fiscal Year 2003," "Development and Implementation of Financial Management Enterprise Architecture"
(ay) Section 1451 of title 40, United States Code, "Applicability to National Security Systems"
(az) Executive Order 12114, "Environmental Effects Abroad of Major Federal Actions," January 4, 1979
(ba) Office of the Secretary of Defense Memorandum, "Designation of Programs for 200x OSD Test and Evaluation (T&E) Oversight," current edition
(bb) DoD Directive 5000.4, "Cost Analysis Improvement Group (CAIG)," November 16, 1994
(bc) DoD 5000.4-M, "Cost Analysis Guidance and Procedures," December 11, 1992
(bd) DoD Directive 1430.13, "Training Simulators and Devices," August 22, 1986
(be) Section 801(d) of the National Defense Authorization Act for Fiscal Year 2002, Public Law 107-107
(bf) Sections 1701-1764 of title 10, United States Code, "Management policies" [of the Defense acquisition workforce]
(bg) DoD Directive 5015.2, "DoD Records Management Program," March 6, 2000

(bh) Section 3101 et seq. of title 44, United States Code, "Records Management by Federal Agencies"
(bi) "Interim Defense Acquisition Guidebook," October 30, 2002
(bj) DoD Directive 5530.3, "International Agreements," June 11, 1987
(bk) Section 2341 of title 10, United States Code, "Authority to Acquire Logistic Support, Supplies, and Services for Elements of the Armed Forces Deployed Outside the U.S."
(bl) Section 2342 of title 10, United States Code, "Cross-Servicing Agreements"

E2. ENCLOSURE 2

ACAT AND MDA

E2.1. General. A technology project or acquisition program shall be categorized based on its location in the acquisition process, dollar value, and MDA special interest.

E2.2. Pre-ACAT Technology Projects. Advanced Technology Demonstrations, Joint Warfighting Experiments, Advanced Concept and Technology Demonstrations, Concept Refinement, and Technology Development occur prior to acquisition program initiation. The USD(AT&L) shall be the MDA for those projects that, if successful, will likely result in an MDAP. The ASD(C3I)/DoD CIO shall be the MDA for those projects that, if successful, will result in a MAIS.

E2.3. Table E2.T1. contains the description and decision authority for ACAT I through III programs.

Table E2.T1. Description and Decision Authority for ACAT I – III Programs

Acquisition Category	Reason for ACAT Designation	Decision Authority
ACAT I	• MDAP (10 USC 2430, reference (n))) o Dollar value: estimated by the USD(AT&L) to require an eventual total expenditure for research, development, test and evaluation (RDT&E) of more than $365 million in fiscal year (FY) 2000 constant dollars or, for procurement, of more than $2.190 billion in FY 2000 constant dollars o MDA designation • MDA designation as special interest	ACAT ID: USD(AT&L) ACAT IC: Head of the DoD Component or, if delegated, the DoD Component Acquisition Executive (CAE)
ACAT IA	• MAIS: Dollar value of AIS estimated by the DoD Component Head to require program costs (all appropriations) in any single year in excess of $32 million in fiscal year (FY) 2000 constant dollars, total program costs in excess of $126 million in FY 2000 constant dollars, or total life-cycle costs in excess of $378 million in FY 2000 constant dollars • MDA designation as special interest	ACAT IAM: ASD(C3I)/DoD CIO ACAT IAC: CAE, as delegated by the DoD CIO
ACAT II	• Does not meet criteria for ACAT I • Major system o Dollar value: estimated by the DoD Component Head to require an eventual total expenditure for RDT&E of more than $140 million in FY 2000 constant dollars, or for procurement of more than $660 million in FY 2000 constant dollars (10 USC 2302d, reference (o)) o MDA designation[4] (10 USC 2302(5), reference (p)) • MDA designation as special interest	DoD CAE or the individual designated by the CAE
ACAT III	• Does not meet criteria for ACAT II or above • Less-than a MAIS program	Designated by the DoD CAE at the lowest level appropriate

Notes:
1. In some cases, an ACAT IA program, as defined above, also meets the definition of an MDAP. The USD(AT&L) and the ASD(C3I)/DoD CIO shall decide who will be the MDA for such programs. Regardless of who is the MDA, the statutory requirements that apply to MDAPs shall apply to such programs.
2. An AIS program is an acquisition program that acquires IT, except IT that involves equipment that is an integral part of a weapon or weapons system, or is an acquisition of services program.
3. The ASD(C3I)/DoD CIO shall designate programs as ACAT IAM or ACAT IAC. MAIS programs shall not be designated as ACAT II.
4. As delegated by the Secretary of Defense or Secretary of the Military Department.

E2.4. The DoD Component shall notify the USD(AT&L) or the ASD(C3I)/DoD CIO when cost growth or a change in acquisition strategy results in reclassifying a formerly lower ACAT program as an ACAT I or IA program. ACAT-level changes shall be reported as soon as the DoD Component anticipates that the program is within 10 percent of the next ACAT level. ACAT-level reclassification shall occur upon designation by the USD(AT&L) or the ASD(C3I)/DoD CIO.

E2.4.1. The CAE shall request a reclassification of an ACAT I or IA program to a lower ACAT. The request shall identify the reasons for the reduction in category. The category reduction shall become effective upon approval of the request by the USD(AT&L) or the ASD(C3I)/DoD CIO.

E2.4.2. The USD(AT&L) or the ASD(C3I)/DoD CIO may reclassify an acquisition program as a pre-MDAP/MAIS or as an ACAT ID or IAM at any time.

E3. ENCLOSURE 3

STATUTORY, REGULATORY, AND CONTRACT REPORTING INFORMATION AND MILESTONE REQUIREMENTS

E3.1. Tables E3.T1, E3.T2, and E3.T3, below, show the information requirements for all milestones and phases, both statutory and regulatory, to include contract reporting. MDAs may tailor regulatory program information to fit the particular conditions of an individual program. A non-mandatory guidebook shall support this Instruction to provide best practices, lessons learned, and expectations for the information required by these tables. Issues regarding the intent of the expectations described in the guidebook shall be resolved by the MDA. The AT&L Knowledge Sharing System (formerly Defense Acquisition Deskbook) contains a library of mandatory policy and regulations and discretionary practices and advice. The web address is http://deskbook.dau.mil/.

E3.2. The following Statutory Information Requirements Table is divided into sections to indicate which information requirements are applicable to MDAPs, MAIS programs, or both. MAIS programs that are also MDAPs are subject to both sets of statutory requirements.

Table E3.T1. Statutory Information Requirements

INFORMATION REQUIRED	APPLICABLE STATUTE	WHEN REQUIRED
The following information requirements are statutory for both MDAPs and MAIS acquisition programs		
Consideration of Technology Issues	10 U.S.C. 2364, reference (q)	Milestone (MS) A MS B MS C
Market Research	10 U.S.C. 2377, reference (r) 15 U.S.C. 644(e)(2), reference (s)	Technology Opportunities User Needs MS A MS B
CCA Compliance (All IT–including NSS) (See enclosure 4, Table E4.T1.)	40 U.S.C. Subtitle III, reference (l) Sec. 8088, Pub.L. 107-248, reference (t) (or successor appropriations act provision)	MS A (MAIS only) Program Initiation for Ships MS B MS C (if equivalent to Full-Rate Production DR) Full-Rate Production DR
Post-Deployment Performance Review	5 U.S.C. 306, reference (u) 40 U.S.C. 11313, reference (v)	Full-Rate Production DR
Registration of mission-critical and mission-essential information systems, RCS: DD-C3I(AR)2096	Sec. 8088(a), Pub.L. 107-248, reference (t) (or successor appropriations act provision) Pub.L. 106-398, Section 811, reference (w)	Program Initiation for Ships MS B (if Program Initiation) MS C (if Program Initiation or if equivalent to Full-Rate Production DR) Full-Rate Production DR (After initial registration, shall be updated quarterly)
Benefit Analysis and Determination (applicable to bundled acquisitions) (part of acquisition strategy)	15 U.S.C. 644(e), reference (s)	MS B MS C (if no MS B)
Beyond-LRIP Report (OSD OT&E Oversight programs only)	10 U.S.C. 2399, reference (h)	Full-Rate Production DR

Programmatic Environment Safety and Occupational Health Evaluation (PESHE) (Including National Environmental Policy Act (NEPA) Compliance Schedule)	42 U.S.C. 4321, reference (x)	Program Initiation for Ships MS B MS C Full-Rate Production DR
Spectrum Certification Compliance (DD Form 1494) (applicable to all systems/equipment that require utilization of the electromagnetic spectrum)	47 U.S.C. 305, reference (y) Pub. L. 102-538, 104, reference (z) 47 U.S.C. 901-904, reference (aa) DoD Directive 4650.1, reference (ab) OMB Circular A-11, Part 2, reference (d)	MS B MS C (if no MS B)
The following information requirements are statutory but are not applicable to MAIS acquisition programs		
Selected Acquisition Report (SAR)— Reports Control Symbol (RCS): DD-AT&L(Q&A)823 (MDAPs only)	10 U.S.C. 2432, reference (ac)	Program Initiation for Ships MS B and annually thereafter End of quarter following MS C Full-Rate Production DR Breach
Unit Cost Report (UCR)— RCS: DD-AT&L(Q&R)1591 (MDAPs only)	10 U.S.C. 2433, reference (ad)	Quarterly
Live-Fire Waiver & Alternate LFT&E Plan (N/A for AISs) (Covered Systems only)	10 U.S.C. 2366, reference (ae)	MS B
Industrial Capabilities (part of acquisition strategy) (N/A for AISs)	10 U.S.C. 2440, reference (af)	MS B MS C
LRIP Quantities (N/A for AISs)	10 U.S.C. 2400, reference (ag)	MS B
Independent Cost Estimate (CAIG) and Manpower Estimate (reviewed by OUSD(P&R)) (N/A for AISs) (MDAPs Only)	10 U.S.C. 2434, reference (ah)	Program Initiation for Ships (cost assessment only) MS B MS C Full-Rate Production DR
LFT&E Report, RCS: DD-OT&E(AR)1845 (LFT&E-covered programs only)	10 U.S.C. 2366, reference (ae)	Full-Rate Production DR
Electronic Warfare (EW) T&E RCS: DD-AT&L(A)2137 (EW programs on OSD T&E Oversight List)	Sec. 220 of Pub. L. 103-160 as amended by Sec. 214 of Pub. L. 103-337, reference (ai)	Annually
Core Logistics Analysis/Source of Repair Analysis (part of acquisition strategy)	10 U.S.C. 2460, reference (aj) 10 U.S.C. 2464, reference (ak) 10 U.S.C. 2466, reference (al)	MS B MS C (if no MS B)
Competition Analysis (Depot-level Maintenance $3M rule) (part of acquisition strategy)	10.U.S.C. 2469, reference (am)	MS B MS C (if no MS B)
The following information requirements are statutory for MDAPs and are applicable to MAIS acquisition programs by this Instruction		
Technology Development Strategy (TDS)	Sec. 803, Pub.L. 107-314, reference (an)	MS A MS B MS C
Acquisition Program Baseline (APB)	10 U.S.C. 2435, reference (ao)	Program Initiation for Ships MS B MS C (updated, as necessary) Full-Rate Production DR
Program Deviation Report	10 U.S.C. 2435, reference (ao)	Immediately upon a program deviation
Operational Test Plan (DOT&E Oversight Programs only)	10 U.S.C. 2399, reference (h)	Prior to start of operational test and evaluation
Cooperative Opportunities (part of acquisition strategy)	10 U.S.C. 2350a, reference (ap)	MS B MS C

The following information requirements are statutory for MAIS acquisition programs and are not applicable to MDAPs		
Certification of compliance with the Clinger-Cohen Act	Sec. 8088, Pub.L. 107-248, reference (t) (or successor appropriations act provision)	MS A MS B MS C (if equivalent to Full-Rate Production DR) Full-Rate Production DR
Certification of compliance with the Financial Management Enterprise Architecture (Financial Management MAIS acquisition programs only)	Sec. 8088, Pub.L. 107-248, reference (t) (or successor appropriations act provision)	MS A MS B MS C (if equivalent to Full-Rate Production DR) Full-Rate Production DR

Table E3.T2. Regulatory Information Requirements

INFORMATION REQUIRED	SOURCE	WHEN REQUIRED
AoA Plan	This Instruction	Concept Decision
ICD	CJCSI 3170.01, reference (g)	Concept Decision MS A MS B MS C (if Program Initiation)
CDD	CJCSI 3170.01, reference (g)	Program Initiation for Ships MS B
CPD	CJCSI 3170.01, reference (g)	MS C
Acquisition Strategy	This Instruction	Program Initiation for Ships MS B MS C Full-Rate Production DR
Analysis of Alternatives (AoA)	This Instruction *	For MDAPs - MS A - Program Initiation for Ships - MS B - MS C (updated as necessary) For MAIS - MS A - MS B (or equivalent) - Full-Rate Production DR (or equivalent)
System Threat Assessment (AIS programs use published Capstone Information Operations System Threat Assessment) (validated by DIA for ACAT ID programs)	DoD Directive 5105.21, reference (aq)	Program Initiation for Ships MS B MS C
Technology Readiness Assessment	This Instruction	Program Initiation for Ships (preliminary assessment) MS B MS C
Independent Technology Assessment (ACAT ID only) (if required by DUSD(S&T))	This Instruction	MS B MS C
Command, Control, Communications, Computers, and Intelligence Support Plan (C4ISP) (also summarized in the acquisition strategy)	DoD Instruction 4630.8 and DoD Directive 4630.5, references (ar) and (as)	Program Initiation for Ships MS B MS C
Command, Control, Communications, Computers, and Intelligence (C4I) Supportability Certification	CJCSI 6212.01, reference (at) This Instruction	Full-Rate Production DR

Interoperability Certification	CJCSI 6212.01, reference (at) This Instruction	Full-Rate Production DR
Affordability Assessment	This Instruction	MS B MS C
Economic Analysis (MAIS only)	This Instruction *	MS A (may be combined with AoA) MS B (or equivalent) Full-Rate Production DR (or equivalent)
Component Cost Analysis (mandatory for MAIS; as requested by CAE for MDAP)	This Instruction	For MDAPs - Program Initiation for Ships - MS B - Full-Rate Production DR For MAIS - Any time an Economic Analysis is required—either by statute or by the MDA
Cost Analysis Requirements Description (MDAPs and MAIS Acquisition Programs only) (CARDs shall be prepared according to the procedures specified in enclosure 6 of this Instruction)	This Instruction	For MDAPs - Program Initiation for Ships - MS B - MS C - Full-Rate Production DR For MAIS - Any time an Economic Analysis is required—either by statute or by the MDA
Test and Evaluation Master Plan (TEMP)	This Instruction	MS A (test and evaluation strategy only) MS B MS C (update, if necessary) Full-Rate Production DR
Operational Test Agency Report of Operational Test and Evaluation Results	This Instruction	MS B MS C Full-Rate Production DR
Component Live-Fire Test and Evaluation Report (N/A for AISs) (Covered Systems Only)	This Instruction	Completion of Live Fire Test and Evaluation
Program Protection Plan (PPP) (for programs with critical program information) (includes Anti-Tamper Annex) (also summarized in the acquisition strategy)	DoD Directive 5200.39, reference (au)	MS B (based on approved requirements in CDD) MS C
Exit Criteria	This Instruction	Program Initiation for Ships MS A MS B MS C Each Review
Defense Acquisition Executive Summary (DAES) RCS: DD-AT&L(Q)1429	This Instruction	Quarterly Upon POM or BES submission Upon unit cost breach
ADM	This Instruction	Program Initiation for Ships MS A MS B MS C Each Review

Earned Value Management Systems (EVMS)	OMB Circular A-11, Part 7, reference (d)	Implement EVMS guidelines in ANSI/EIA-748-1998 (reference (av)) and conduct Integrated Baseline Reviews (applies to contracts/agreements for RDT&E over $73 million and procurement or O&M over $315 million, both in FY 2000 constant dollars)
* For a MAIS acquisition program, required by Pub.L. 107-248, Section 8088, reference (t), at Milestones A and B, and at the full-rate production decision (or their equivalents).		

Table E3.T3. Contract Reporting Requirements

REQUIRED REPORT	SOURCE	WHEN REQUIRED
Contractor Cost Data Report (CCDR)	DoD 5000.4-M-1, reference (aw) This Instruction	• All major contracts and subcontracts, regardless of contract type, for ACAT I programs valued at more than $50 million (FY 2002 constant dollars) • Not required for contracts priced below $7 million (FY 2002 constant dollars) • The CCDR requirement on high-risk or high-technical-interest contracts priced between $7 and $50 million is left to the discretion of the Cost Working Integrated Product Team (IPT) • Not required for procurement of commercial systems, or for non-commercial systems bought under competitively awarded, firm fixed-price contracts, as long as competitive conditions continue to exist
Software Resources Data Report (SRDR)	This Instruction	All major contracts and subcontracts, regardless of contract type, for contractors developing/producing software elements within ACAT I and ACAT IA programs for any software development element with a projected software effort greater than $25M (FY 2002 constant dollars). Submit data on each software element at the following times: -180 days prior to contract award -60 days after contract award -60 days after start of subsequent software releases -within 120 days after software release or final delivery

E4. ENCLOSURE 4
IT CONSIDERATIONS

E4.1. Mission-Critical/Mission-Essential Information System

E4.1.1. Mission-Critical Information System. A system that meets the definitions of "information system" and "national security system" in the CCA (reference (l)), the loss of which would cause the stoppage of warfighter operations or direct mission support of warfighter operations. (Note: The designation of mission critical shall be made by a Component Head, a Combatant Commander, or their designee. A financial management IT system shall be considered a mission-critical IT system as defined by the USD(C).) A "Mission-Critical Information Technology System" has the same meaning as a "Mission-Critical Information System."

E4.1.2. Mission-Essential Information System. A system that meets the definition of "information system" in reference (l), that the acquiring Component Head or designee determines is basic and necessary for the accomplishment of the organizational mission. (Note: The designation of mission essential shall be made by a Component Head, a Combatant Commander, or their designee. A financial management IT system shall be considered a mission-essential IT system as defined by the USD(C).) A "Mission-Essential Information Technology System" has the same meaning as a "Mission-Essential Information System."

E4.2. IT System Procedures

E4.2.1. The MDA shall not approve program initiation or entry into any phase that requires milestone approval for an acquisition program (at any level) for a mission-critical or mission-essential IT system until the DoD Component CIO confirms or certifies (for MAIS only) that the system is being developed in accordance with reference (l). At a minimum, the DoD Component CIO's confirmation or certification shall include a written description of the three materiel questions of section 3.6.4 and the considerations in Table E4.T1.

E4.2.2. PMs shall prepare a table such as the one illustrated at Table E4.T1. to indicate which acquisition documents correspond to the CCA requirements. DoD Component CIOs shall use the acquisition documents identified in the table to assess CCA compliance. The requirements for submission of written confirmation or certification (for MAIS only) shall be satisfied by the DoD Component CIO's concurrence with the PM's CCA Compliance Table. Issues related to compliance shall be resolved via the IPT process. The cognizant PSA shall coordinate on the CCA Compliance Table. No Milestone A, B, or Full-Rate Production decision (or their equivalent) shall be granted for a MAIS until the DoD CIO certifies that the MAIS program is being developed in accordance with the CCA.

E4.2.3. For MDAP and MAIS programs, the DoD Component CIO's confirmation (for MDAP) and certification (for MAIS) shall be provided to both the DoD CIO and the MDA.

E4.2.4. The DoD Components shall not award a contract for the acquisition of a mission-critical or mission-essential IT system, at any level, until the following have been accomplished:

E4.2.4.1. The DoD Component registers the system with the DoD CIO;

E4.2.4.2. The DoD CIO determines the system has an appropriate information assurance strategy; and

E4.2.4.3. The DoD Component CIO confirms that the system is being developed in accordance with the CCA by complying with paragraph E4.2.1 (above).

E4.2.5. The requirement to confirm or, for MAIS only, to certify CCA compliance applies to milestone decisions for each increment of an evolutionary acquisition. The requirements of

the CCA apply to all IT (including NSS) acquisitions, but subparagraph E4.2.4, above, applies only to mission-critical and mission-essential IT systems.

E4.2.6. At Milestone C, for MAIS, the MDA shall approve, in coordination with DOT&E, the quantity and location of sites for a limited deployment for IOT&E.

E4.2.7. When the use of commercial IT is considered viable, maximum leverage of and coordination with the DoD Enterprise Software Initiative shall be made.

E4.2.8. For financial management MAIS acquisition programs, the MDA shall not grant any milestone or full-rate production approval, or their equivalent, until the USD(C) certifies that the system is being developed and managed in accordance with the DoD Financial Management Enterprise Architecture (reference (t) and Sec.1004 of Pub.L. 107-314 (reference (ax))).

E4.2.9. An amount in excess of $1,000,000 may be obligated for defense financial system improvement (i.e., a new, or modification of, a budgetary, accounting, finance, enterprise resource planning, or mixed (financial and non-financial) information system) only if the USD(C) determines and certifies that the system is being developed or modified, and acquired and managed in a manner that is consistent with both the DoD Financial Management Enterprise Architecture and the DoD Financial Management Enterprise Architecture Transition Plan. The USD(C) shall provide such certification to the MDA before any milestone or full-rate production approval, or their equivalent, is made by the MDA.

Table E4.T1. CCA Compliance Table

Requirements Related to the Clinger-Cohen Act (CCA) of 1996 (reference (l))	Applicable Program Documentation **
*** Make a determination that the acquisition supports core, priority functions of the Department	ICD Approval
*** Establish outcome-based performance measures linked to strategic goals	ICD, CDD, CPD and APB approval
*** Redesign the processes that the system supports to reduce costs, improve effectiveness and maximize the use of COTS technology	Approval of the ICD, Concept of Operations, AoA, CDD, and CPD
* No Private Sector or Government source can better support the function	Acquisition Strategy page XX, para XX AoA page XX
* An analysis of alternatives has been conducted	AoA
* An economic analysis has been conducted that includes a calculation of the return on investment; or for non-AIS programs, a Life-Cycle Cost Estimate (LCCE) has been conducted	Program LCCE Program Economic Analysis for MAIS
There are clearly established measures and accountability for program progress	Acquisition Strategy page XX APB
The acquisition is consistent with the Global Information Grid policies and architecture, to include relevant standards	APB (Interoperability KPP) C4ISP (Information Exchange Requirements)
The program has an information assurance strategy that is consistent with DoD policies, standards and architectures, to include relevant standards	Information Assurance Strategy
To the maximum extent practicable, (1) modular contracting has been used, and (2) the program is being implemented in phased, successive increments, each of which meets part of the mission need and delivers measurable benefit, independent of future increments	Acquisition Strategy page XX
The system being acquired is registered	Registration Database

* For weapons systems and command and control systems, these requirements apply to the extent practicable (40 U.S.C. 1451, reference (ay))

** The system documents/information cited are examples of the most likely but not the only references for the required information. If other references are more appropriate, they may be used in addition to or instead of those cited.

***These requirements are presumed to be satisfied for Weapons Systems with embedded IT and for Command and Control Systems that are not themselves IT systems

E5. ENCLOSURE 5

INTEGRATED TEST AND EVALUATION (T&E)

E5.1. The PM, in concert with the user and test and evaluation communities, shall coordinate developmental test and evaluation (DT&E), operational test and evaluation (OT&E), LFT&E, family-of-systems interoperability testing, information assurance testing, and modeling and simulation (M&S) activities, into an efficient continuum, closely integrated with requirements definition and systems design and development. The T&E strategy shall provide information about risk and risk mitigation, provide empirical data to validate models and simulations, evaluate technical performance and system maturity, and determine whether systems are operationally effective, suitable, and survivable against the threat detailed in the System Threat Assessment. The T&E strategy shall also address development and assessment of the weapons support equipment during the SDD phase, and into production, to ensure satisfactory test system measurement performance, calibration traceability and support, required diagnostics, and safety. Adequate time and resources shall be planned to support pre-test predictions and post-test reconciliation of models and test results, for all major test events. The PM, in concert with the user and test communities, shall provide safety releases to the developmental and operational testers prior to any test using personnel.

E5.2. The PM shall design DT&E objectives appropriate to each phase and milestone of an acquisition program. Testing shall be event driven and monitored by the use of success criteria within each phase, OT&E entrance criteria, and other metrics designed to measure progress and support the decision process. The OTA shall design OT&E objectives appropriate to each phase and milestone of a program, and submit them to the PM for inclusion in the Test and Evaluation Master Plan (TEMP). Completed IOT&E and completed LFT&E shall support a beyond LRIP decision for ACAT I and II programs for conventional weapons systems designed for use in combat. For this purpose, OT&E shall require more than an OA based exclusively on computer modeling, simulation, or an analysis of system requirements, engineering proposals, design specifications, or any other information contained in program documents (10 U.S.C. 2399 and 10 U.S.C. 2366, references (h) and (ae)).

E5.3. T&E Strategy

E5.3.1. Projects that undergo a Milestone A decision shall have a T&E strategy that shall primarily address M&S, including identifying and managing the associated risk, and that shall evaluate system concepts against mission requirements. Pre-Milestone A projects shall rely on the ICD as the basis for the evaluation strategy. For programs on the OSD T&E Oversight List, the T&E strategy shall be submitted to USD(AT&L) and DOT&E for approval.

E5.3.2. The T&E strategy for a program using an evolutionary acquisition strategy shall remain consistent with the time-phased requirements in the CDD/CPD.

E5.4. T&E Planning

E5.4.1. TEMP. The PMs for MDAPs, MAIS Acquisition Programs, and programs on the OSD T&E Oversight List shall submit a TEMP to the USD(AT&L) and the DOT&E for approval to support Milestones B and C and the Full-Rate Production decision. The TEMP shall describe planned developmental, operational, and live fire testing, including measures to evaluate

the performance of the system during these test periods; an integrated test schedule; and the resource requirements to accomplish the planned testing. The MDA or designee shall ensure that IOT&E entrance criteria, to be used to determine IOT&E readiness certification in support of each planned operational test, are developed and documented in the TEMP.

E5.4.2. Planning shall provide for completed DT&E, IOT&E, and LFT&E, as required, before entering full-rate production.

E5.4.3. Test planning for commercial and non-developmental items shall recognize commercial testing and experience, but nonetheless determine the appropriate DT&E, OT&E, and LFT&E needed to ensure effective performance in the intended operational environment.

E5.4.4. Test planning and conduct shall take full advantage of existing investment in DoD ranges, facilities, and other resources, including the use of embedded instrumentation.

E5.4.5. Planning shall consider the potential testing impacts on the environment (42 U.S.C. 4321-4370d and E.O. 12114, references (x) and (az)).

E5.4.6. The concept of early and integrated T&E shall emphasize prototype testing during system development and demonstration and early OAs to identify technology risks and provide operational user impacts.

E5.4.7. Appropriate use of accredited models and simulation shall support DT&E, IOT&E, and LFT&E.

E5.4.8. The DOT&E and the Deputy Director, DT&E/Office of Defense Systems (DS), Office of the USD(AT&L), shall have full and timely access to all available developmental, operational, and live-fire T&E data and reports.

E5.4.9. Interoperability Testing. All DoD MDAPs, programs on the OSD T&E Oversight list, post-acquisition (legacy) systems, and all programs and systems that must interoperate, are subject to interoperability evaluations throughout their life cycles to validate their ability to support mission accomplishment. For IT systems, including NSS, with interoperability requirements, the Joint Interoperability Test Command (JITC) shall provide system interoperability test certification memoranda to the Director, Joint Staff J-6, throughout the system life-cycle and regardless of ACAT.

E5.5. Developmental Test and Evaluation (DT&E). During DT&E, the materiel developer shall:

E5.5.1. Identify the technical capabilities and limitations of the alternative concepts and design options under consideration;

E5.5.2. Identify and describe design technical risks;

E5.5.3. Stress the system under test to at least the limits of the Operational Mode Summary/Mission Profile, and, for some systems, beyond the normal operating limits to ensure the robustness of the design;

E5.5.4. Assess technical progress and maturity against critical technical parameters, to include interoperability, documented in the TEMP;

E5.5.5. Assess the safety of the system/item to ensure safety during OT and other troop-supported testing and to support success in meeting design safety criteria;

E5.5.6. Provide data and analytic support to the decision process to certify the system ready for IOT&E;

E5.5.7. Conduct information assurance testing on any system that collects, stores, transmits, or processes unclassified or classified information.

E5.5.8. In the case of IT systems, including NSS, support the DoD Information Technology Security Certification and Accreditation Process and Joint Interoperability Certification process;

E5.5.9. In the case of financial management, enterprise resource planning, and mixed financial management systems, the developer shall conduct an independent assessment of compliance factors established by the Office of the USD(C); and,

E5.5.10. Prior to full-rate production, demonstrate the maturity of the production process through Production Qualification Testing of LRIP assets.

E5.6. Readiness for IOT&E. The Services shall each establish an Operational Test Readiness Process for programs on the OSD T&E Oversight List, consistent with the following requirements:

E5.6.1. The process shall include a review of DT&E results; an assessment of the system's progress against critical technical parameters documented in the TEMP; an analysis of identified technical risks to verify that those risks have been retired during developmental testing; and a review of the IOT&E entrance criteria specified in the TEMP. Programs shall provide copies of the DT&E report and the progress assessment to USD(AT&L) and DOT&E.

E5.6.2. The Service Acquisition Executive shall evaluate and determine materiel system readiness for IOT&E.

E5.7. Operational Test and Evaluation (OT&E)

E5.7.1. OT&E shall determine the operational effectiveness and suitability of a system under realistic operational conditions, including combat; determine if thresholds in the approved CPD and critical operational issues have been satisfied; and assess impacts to combat operations.

E5.7.2. The lead OTA shall brief the DOT&E on concepts for an OT&E 120 days prior to start. They shall submit the OT&E plan 60 days prior, and shall report major revisions as they occur.

E5.7.3. Typical users shall operate and maintain the system or item under conditions simulating combat stress and peacetime conditions.

E5.7.4. The independent OTAs shall use production or production representative articles for the dedicated phase of IOT&E that supports the full-rate production decision (or for ACAT IA or other acquisition programs, the full-deployment decision).

E5.7.5. Hardware and software alterations that materially change system performance, including system upgrades and changes to correct deficiencies, shall undergo OT&E.

E5.7.6. OTAs shall conduct an independent, dedicated phase of IOT&E before full-rate production to evaluate operational effectiveness and suitability, as required by reference (h).

E5.7.7. All weapon, Command, Control, Communications, Computers, Intelligence, Surveillance, and Reconnaissance (C4ISR), and information programs that are dependent on

external information sources, or that provide information to other DoD systems, shall be tested and evaluated for information assurance.

E5.7.8. The DOT&E shall determine the quantity of articles procured for IOT&E for MDAPs; the cognizant OTA shall make this decision for non-MDAPs (reference (h)).

E5.7.9. The DOT&E shall assess the adequacy of IOT&E and LFT&E, and evaluate the operational effectiveness, suitability, and survivability, as applicable, of systems under DOT&E oversight. DOT&E-oversight programs beyond LRIP, shall require continued DOT&E test plan approval, monitoring, and FOT&E reporting to:

E5.7.9.1. Complete IOT&E activity;

E5.7.9.2. Refine IOT&E estimates;

E5.7.9.3. Verify correction of deficiencies;

E5.7.9.4. Evaluate significant changes to system design or employment; and

E5.7.9.5. Evaluate whether or not the system continues to meet operational needs and retain operational effectiveness in a substantially new environment, as appropriate.

E5.7.10. OT&E Information Promulgation

E5.7.10.1. The responsible test organization shall release valid test data and factual information in as near real-time as possible to all DoD organizations and contractors with a need to know. Data may be preliminary and shall be identified as such.

E5.7.10.2. To protect the integrity of the OTA evaluation process, release of evaluation results may be withheld until the final report, according to the established policies of each OTA. Nothing in this policy shall be interpreted as limiting the statutory requirement for immediate access to all OT&E results by DOT&E.

E5.7.10.3. The primary intent of this policy is to give developing agencies visibility of factual data produced during OT&E, while not allowing the developmental agency any influence over the outcome of those evaluations.

E5.7.11. Use of Contractors in Support of OT&E

E5.7.11.1. Per reference (h), persons employed by the contractor for the system being developed may only participate in OT&E of major defense acquisition programs to the extent that is planned for them to be involved in the operation, maintenance, and other support of the system when deployed in combat.

E5.7.11.2. A contractor that has participated (or is participating) in the development, production, or testing of a system for a DoD Component (or for another contractor of the Department of Defense) may not be involved in any way in establishing criteria for data collection, performance assessment, or evaluation activities for OT&E. The DOT&E may waive such limitation if the DOT&E determines, in writing, that sufficient steps have been taken to ensure the impartiality of the contractor in providing the services. These limitations do not apply to a contractor that has participated in such development, production, or testing, solely in test or test support on behalf of the Department of Defense.

E5.8. OSD T&E Oversight List. The DOT&E and the Director, DS, shall jointly, and in consultation with the T&E executives of the cognizant DoD Components, determine the

programs designated for OSD T&E oversight. The DoD memorandum entitled "Designation of Programs for OSD Test and Evaluation (T&E) Oversight" (reference (ba)) identifies these programs.

E5.9. Live-Fire Test and Evaluation (LFT&E)[1]. Reference (ae) mandates LFT&E and formal LFT&E reporting for all covered systems. The DOT&E shall approve the LFT&E strategy for covered systems prior to Milestone B.

E5.10. Modeling and Simulation (M&S). The PM shall plan for M&S throughout the acquisition life cycle. The PM shall identify and fund required M&S resources early in the life cycle

E5.11. Foreign Comparative Testing (FCT). 10 U.S.C. 2350a(g) (reference (ap)) prescribes funding for U.S. T&E of selected allied and friendly foreign countries' equipment and technologies when such items and technologies have potential to satisfy approved DoD requirements. The USD(AT&L) shall centrally manage FCT and notify the Speaker of the House, the President of the Senate, the House Armed Services Committee, the Senate Armed Services Committee, and the Appropriations Committees of the Senate and the House of Representatives at least 30 days prior to committing funds to start a new FCT evaluation.

E5.12. Testing Increments of an Evolutionary Acquisition Program. The structure of these test activities depends on the program acquisition strategy. In general, all increment testing programs shall:

E5.12.1. Provide for early involvement of the Service OTA/JITC in DT&E and test planning;

E5.12.2. Conduct adequate DT&E, LFT&E, and IOT&E of each new incremental capability;

E5.12.3. Integrate, as appropriate, and without compromising the specific requirements of the different types of testing, successive periods of DT&E, LFT&E, and IOT&E;

E5.12.4. Tailor test content and reporting against earlier test results, evaluating at a minimum the increment of mission accomplishment and survivability required of the new increment, plus whether or not performance previously demonstrated by the previous increment has been degraded;

E5.12.5. The Service shall perform an independent operational assessment prior to release of each successive increment to the user; and

E5.12.6. For programs under OT&E and/or LFT&E oversight, support DOT&E's intended schedule for reporting to the Secretary of Defense and Congressional defense committees, whether through phased submittal of dedicated reports or through DOT&E annual reports to the Congress.

[1] Not applicable to ACAT IA programs.

E6. ENCLOSURE 6

RESOURCE ESTIMATION

E6.1. Cost Analysis Improvement Group (CAIG) Independent Life-Cycle Cost Estimates (LCCEs). The OSD CAIG shall prepare independent LCCEs per 10 U.S.C. 2434 (reference (ah)). The CAIG shall provide the MDA with an independent LCCE at major decision points as specified in statute, and when directed by the MDA. The MDA shall consider the independent LCCE before approving entry into SDD or into Production and Deployment. The CAIG shall also prepare an ICE for ACAT IC programs at the request of the USD(AT&L) or the ASD(C3I). A CAIG ICE is not required for ACAT IA programs. (DoD Directive 5000.4, (reference (bb)))

E6.2. Cost Analysis Requirements Description (CARD). For ACAT I and IA programs, the PM shall prepare, and an authority no lower than the DoD Component Program Executive Officer (PEO), shall approve the CARD. DoD 5000.4-M, reference (bc), specifies CARD content. For joint programs, the CARD shall cover the common program as agreed to by all participating DoD Components, as well as any DoD Component-unique requirements. The teams preparing the program office LCCE, the component cost analysis, if applicable, and the independent LCCE shall receive a draft CARD 180 days, and the final CARD 45 days, prior to a planned OIPT or DoD Component review, unless the OIPT leader agrees to other due dates.

E6.3. CCDR System. The CCDR system is the primary DoD means of collecting data on the costs and resource usage that DoD contractors incur in performing DoD programs. The Chair, CAIG, shall prescribe a format for the CCDR and the SRDR, and establish reporting system policies in DoD 5000.4.M-1, reference (aw). The Chair shall monitor the implementation of policy to ensure consistent and appropriate application throughout the Department of Defense. The Chair may waive the information requirements of Table E3.T3. of enclosure 3.

E6.4. CAIG Procedures. The DoD Component responsible for acquisition of a system shall cooperate with the CAIG and provide the cost, programmatic, and technical information required for estimating costs and appraising cost risks. The DoD Component shall also facilitate CAIG staff visits to the program office, product centers, test centers, and system contractor(s). The process through which the ICE is prepared shall be consistent with the following policies (reference (aw)):

E6.4.1. The CAIG shall participate in IPT meetings (Cost Working-level IPTs/Integrating IPTs/OIPTs);

E6.4.2. The CAIG, DoD Components, and PM shall share data, models and use the same CARD;

E6.4.3. The CAIG, DoD Components, and PM shall raise and resolve issues in a timely manner and at the lowest possible level;

E6.4.4. The CAIG shall brief the preliminary, independent, LCCE to the PM 45 days before the OIPT, and the final estimate 21 days before the OIPT;

E6.4.5. The CAIG, DoD Component, and PM shall address differences between the independent LCCE and the PM/Service estimate;

E6.4.6. The PM shall identify issues projected to be brought to the OIPT to the Chairman, CAIG, in a timely manner.

E6.5. Analysis of Alternatives Procedures. For potential and designated ACAT I and IA programs, the Director, Program Analysis & Evaluation (D,PA&E) shall direct development of the analysis of alternatives by preparing initial guidance, reviewing the analysis plan, and reviewing the final analysis products. The guidance shall be issued to the DoD Component, or for ACAT IA programs, to the office of the PSA responsible for the mission area. The DoD Component or the PSA shall designate responsibility for completion of the AoA, but it may not be assigned to the PM. An analysis plan shall be provided to the Office of the D,PA&E for review prior to the start of the AoA and the final AoA shall be provided to the D,PA&E not later than 60 days prior to the DAB or ITAB meeting for milestone reviews. The D,PA&E shall evaluate the AoA and provide an assessment to the Head of the DoD Component or PSA and to the MDA. In this evaluation, the D,PA&E shall assess the extent to which the AoA:

E6.5.1. Illuminated capability advantages and disadvantages;

E6.5.2. Considered joint operational plans;

E6.5.3. Examined sufficient feasible alternatives;

E6.5.4. Discussed key assumptions and variables and sensitivity to changes in these;

E6.5.5. Assessed technology risk and maturity; and

E6.5.6. Calculated costs.

E7. ENCLOSURE 7
HUMAN SYSTEMS INTEGRATION (HSI)

E7.1. General. The PM shall have a comprehensive plan for HSI in place early in the acquisition process to optimize total system performance, minimize total ownership costs, and ensure that the system is built to accommodate the characteristics of the user population that will operate, maintain, and support the system. HSI planning shall be summarized in the acquisition strategy and address the following:

E7.2. Human Factors Engineering. The PM shall take steps (e.g., contract deliverables and Government/contractor IPT teams) to ensure human factors engineering/cognitive engineering is employed during systems engineering over the life of the program to provide for effective human-machine interfaces and to meet HSI requirements. Where practicable and cost effective, system designs shall minimize or eliminate system characteristics that require excessive cognitive, physical, or sensory skills; entail extensive training or workload-intensive tasks; result in mission-critical errors; or produce safety or health hazards.

E7.3. Personnel. The PM shall work with the personnel community to define the human performance characteristics of the user population based on the system description, projected characteristics of target occupational specialties, and recruitment and retention trends. To the extent possible, systems shall not require special cognitive, physical, or sensory skills beyond that found in the specified user population. For those programs that require skill requirements that exceed the knowledge, skills, and abilities of current military occupational specialties or that require additional skill indicators or hard-to-fill military occupational specialties, the PM shall consult with personnel communities to identify readiness, personnel tempo (PERSTEMPO), and funding issues that impact program execution.

E7.4. Habitability. The PM shall work with habitability representatives to establish requirements for the physical environment (e.g., adequate space and temperature control) and, if appropriate, requirements for personnel services (e.g., medical and mess) and living conditions (e.g., berthing and personal hygiene) for conditions that have a direct impact on meeting or sustaining system performance or that have such an adverse impact on quality of life and morale that recruitment or retention is degraded.

E7.5. Manpower. In advance of contracting for operational support services, the PM shall work with the manpower community to determine the most efficient and cost-effective mix of DoD manpower and contract support. Once the Manpower Estimate is approved by the DoD Component manpower authority, it shall serve as the authoritative source for reporting manpower in other program documentation.

E7.6. Training. The PM shall work with the training community to develop options for individual, collective, and joint training for operators, maintainers and support personnel and, where appropriate, base training decisions on training effectiveness evaluations. The PM shall address major elements of the training system described in DoD Directive 1430.13, reference (bd), and place special emphasis on options that enhance user capabilities, maintain skill proficiencies, and reduce individual and collective training costs. The PM shall develop training system plans to maximize the use of new learning techniques, simulation technology, embedded

training, and instrumentation systems that provide anytime, anyplace training and reduce the demand on the training establishment. Where possible, the PM shall maximize the use of simulation-supported embedded training, and the training systems shall fully support and mirror the interoperability of the operational system. For training programs that require training infrastructure modifications, the PM shall identify technology, schedule, and funding issues that impact program execution.

E7.7. Environment, Safety and Occupational Health (ESOH). As part of risk reduction, the PM shall prevent ESOH hazards where possible, and shall manage ESOH hazards where they cannot be avoided. The acquisition strategy shall incorporate a summary of the Programmatic ESOH Evaluation (PESHE), including ESOH risks, a strategy for integrating ESOH considerations into the systems engineering process, identification of ESOH responsibilities, a method for tracking progress, and a compliance schedule for NEPA (42 U.S.C. 4321-4370d and Executive Order 12114, references (x) and (az)). During system design, the PM shall document hazardous materials used in the system and plan for the system's demilitarization and disposal. The CAE (or for joint programs, the CAE of the Lead Executive Component) or designee, is the approval authority for system-related NEPA and E.O. 12114 documentation. For acceptance of ESOH mishap risks identified by the program, the CAE is the acceptance authority for high risks, PEO-level for serious risks, and the PM for medium and low risks as defined in the industry standard for system safety.

E7.8. Survivability. For systems with missions that might require exposure to combat threats, the PM shall address personnel survivability issues including protection against fratricide, detection, and instantaneous, cumulative, and residual nuclear, biological, and chemical effects; the integrity of the crew compartment; and provisions for rapid egress when the system is severely damaged or destroyed. The PM shall address special equipment or gear needed to sustain crew operations in the operational environment.

E8. ENCLOSURE 8

ACQUISITION OF SERVICES

E8.1. General. Section 801 of the National Defense Authorization Act for Fiscal Year 2002, Pub. L. 107-107, reference (be), required establishment of a management structure for the procurement of services by the Department of Defense. This management structure requires that the acquisition of services shall be based on clear, performance-based requirements, and require identified and measurable outcomes properly planned and administered to achieve the intended results. The following guidance shall apply.

E8.2. Outcomes

E8.2.1. All service acquisitions shall use a strategic approach that includes developing a picture of what the Department of Defense is spending on services; an enterprise-wide approach to procuring services; and developing new ways of doing business.

E8.2.2. All service acquisitions shall be acquired by business arrangements that are in the best interests of the Department of Defense and are entered into or issued and managed in compliance with applicable statutes, regulations, directives, and other requirements, regardless of whether the services are acquired by the Department of Defense or by an official of the United States outside the Department of Defense. PMs shall coordinate with the DoD Component manpower authority in advance of contracting for operational support services to ensure that tasks and duties that are designated as inherently governmental or exempt are not contracted.

E8.3. Decision Authorities shall establish mandatory procedures for assigned service acquisitions.

E8.4. Each DoD Component shall establish a management review process that provides for consistent review and approval of service acquisitions.

E8.5. Each acquisition of services shall have:

E8.5.1. A documented acquisition strategy, updated when changes occur;

E8.5.2. Metrics for cost, schedule and performance;

E8.5.3. An approved data system for the collection and reporting of required data.

E8.6. The Decision Authority shall conduct execution reviews to assess progress against the metrics.

E8.7. Management of the acquisition of services is the responsibility of the USD(AT&L), the ASD(C3I) for information technology, the CAE, the Head of Contracting Activity (HCA) (for those DoD Components without a CAE), or such designated officials in each Service/Agency as identified by the CAE or HCA (for those DoD Components without a CAE). Each of these designated officials can be a Decision Authority, and have the authority to exercise approval over the service acquisition, provided the designated official is independent of the official developing and executing the service acquisition strategy.

E8.8. The acquisition of services may require the execution of multiple contracts or other instruments for committing or obligating funds (e.g. funds transfers; placing orders under existing contracts), therefore, the management level shall be determined using the total planned dollar value (including options, contingencies, funds transfers, provisioning, etc) of the acquisition.

E9. ENCLOSURE 9

PROGRAM MANAGEMENT

E9.1. Assignment of Program Managers. A PM shall be designated for each acquisition program. This designation shall be made no later than program initiation. It is essential that the PM have an understanding of user needs and constraints, familiarity with development principles, and requisite management skills and experience. If the acquisition is for services, the PM shall be familiar with DoD guidance on acquisition of services. A PM and a deputy PM of an ACAT I, IA, or II program shall be assigned to the position at least until completion of the major milestone that occurs closest in time to the date on which the person has served in the position for 4 years in accordance with the Defense Acquisition Workforce Improvement Act (reference (bf)). Upon designation, the PM shall be given budget guidance and a written charter of his or her authority, responsibility, and accountability for accomplishing approved program objectives.

E9.2. Assignment of Program Executive Responsibility

E9.2.1. Unless a waiver is granted for a particular program by the USD(AT&L) or the ASD(C3I)/DoD CIO, CAEs shall assign acquisition program responsibilities to a PEO for all ACAT I, ACAT IA, and sensitive classified programs, or for any other program determined by the CAE to require dedicated executive management.

E9.2.2. The PEO shall be dedicated to executive management and shall not have other command responsibilities.

E9.2.3. The CAE shall make this assignment no later than program initiation; or within 3 months of estimated total program cost reaching the appropriate dollar threshold for ACAT I and ACAT IA programs. CAEs may determine that a specific PM shall report directly, without being assigned to a PEO, whenever such direct reporting is appropriate. The CAE shall notify the USD(AT&L) or the ASD(C3I)/DoD CIO of the decision to have a PM report directly to the CAE.

E9.2.4. Acquisition program responsibilities for programs not assigned to a PEO or a direct-reporting PM shall be assigned to a commander of a systems, logistics, or materiel command. In order to transition from a PEO to a commander of a systems, logistics, or materiel command, a program or increment of capability shall, at a minimum, have passed Initial Operating Capability (IOC), have achieved full-rate production, be certified as interoperable within the intended operational environment, and be supportable as planned.

E9.3. Life-Cycle Management of Information. PMs shall comply with record keeping responsibilities under the Federal Records Act for the information collected and retained in the form of electronic records. (See DoD Directive 5015.2, reference (bg)).) Electronic record keeping systems shall preserve the information submitted, as required by 44 U.S.C. 3101, reference (bh)) and implementing regulations. Electronic record keeping systems shall also provide, wherever appropriate, for the electronic acknowledgment of electronic filings that are successfully submitted. PMs shall consider the record keeping functionality of any systems that store electronic documents and electronic signatures to ensure users have appropriate access to the information and can meet the Agency's record keeping needs.

E9.4. International Cooperative Program Management

E9.4.1. An international cooperative program is any acquisition system, subsystem, component, or technology program with an acquisition strategy that includes participation by one or more foreign nations, through an international agreement, during any phase of a system's life cycle. All AT&L-related international agreements may use the USD(AT&L)-issued streamlined procedures in the Defense Acquisition Guidebook (reference (bi)) for review and approval rather than the procedures in DoD Directive 5530.3, reference (bj). All international cooperative programs shall fully comply with foreign disclosure and program protection requirements. Programs containing classified information shall have a Delegation of Disclosure Authority Letter or other written authorization issued by the DoD Component's cognizant foreign disclosure office prior to entering discussions with potential foreign partners.

E9.4.2. Acquisition and Cross Servicing Agreement (ACSA). PMs and others responsible for the acquisition and reciprocal transfer of logistic support, supplies, and services shall be aware of and understand the legal authority (10 U.S.C. 2341 and 2342, references (bk) and (bl)) for the use of ACSAs and the potential impact that ACSA acquisition and reciprocal transfers may have on their on support strategies.

E9.4.3. Additional Funding Considerations. The DoD Components shall not terminate or substantially reduce participation in international cooperative ACAT ID programs under signed international agreements without USD(AT&L) approval; or in international cooperative ACAT IAM programs without ASD(C3I) approval. A DoD Component may not terminate or substantially reduce U.S. participation in an international cooperative program until after providing notification to the USD(AT&L) or the ASD(C3I). As a result of that notification, the USD(AT&L) or the ASD(C3I) may require the DoD Component to continue to provide some or all of the funding for that program in order to minimize the impact on the international cooperative program. Substantial reduction is defined as a funding or quantity decrease of 25 percent or more in the total funding or quantities in the latest President's Budget for that portion of the international cooperative program funded by the DoD Component seeking the termination or reduced participation.

E9.5. Joint Program Management. The DoD Components shall not terminate or substantially reduce participation in joint ACAT ID programs without Requirements Authority review and USD(AT&L) approval; or in joint ACAT IA programs without Requirements Authority review and ASD(C3I) approval. The USD(AT&L) or the ASD(C3I) may require a DoD Component to continue some or all funding, as necessary, to sustain the joint program in an efficient manner, despite approving their request to terminate or reduce participation. Substantial reduction is defined as a funding or quantity decrease of 50 percent or more in the total funding or quantities in the latest President's Budget for that portion of the joint program funded by the DoD Component seeking the termination or reduced participation.